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|  <b>UTM</b><br>UNIVERSITI TEKNOLOGI MALAYSIA | <b>PUSAT PENGURUSAN MAKMAL<br/>UNIVERSITI (PPMU)</b> | Form Num.         | UURL/F/47                    |
|                                                                                                                               |                                                      | Version           | 3/2026                       |
|                                                                                                                               |                                                      | Effective Date    | 17/8/2026                    |
|                                                                                                                               |                                                      | Equipment         | SURFACE AREA & PORE ANALYZER |
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| <b>SURFACE SCIENCE LABORATORY</b>                                                                                             |                                                      |                   |                              |
| <b>SAMPLE SUBMISSION FORM</b>                                                                                                 |                                                      |                   |                              |

**General Rules and Requirements :**

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                         |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | All information provided should be true.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                         |
| 2.  | Sample submission procedure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                         |
|     | a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Complete the Sample Submission Form including the Client Confidentiality Statement (Appendix 1).                                                                                                                                                                                        |
|     | b.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | For sample submission via walk-in : Submit the completed Sample Submission Form and samples to UIRL Sample Acceptance Counter.                                                                                                                                                          |
|     | c.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | For sample submission via mail : Submit the completed Sample Submission Form and the samples. Samples must be packaged in a suitable container for courier delivery. The parcel should be addressed to the person in charge of the instrument, as it will be received directly by them. |
| 3.  | Fast Lane Service: A priority testing service that delivers results within 3–7 working days, compared to the standard 14 working days. This service is subject to availability and incurs an additional 50% charge on the standard testing fee. Customers wishing to use this service must contact the person in charge. Payment must be made via Log card (for UTM customers only) or the UTM PayHub system (for UTM and non-UTM customers) to confirm the service request. Full payment and proof of payment are required to confirm the booking. |                                                                                                                                                                                                                                                                                         |
| 4.  | For sample criteria and conditions, refer to UIRL Sample Submission Criteria in the PPMU website at ppmu.utm.my.                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                         |
| 5.  | PPMU has the right to cancel any analysis if the sample is suspected to have a high risk on the safety of the operator or can cause damage to the instrument during the analysis. The cost of damages will be borne by the customer.                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                         |
| 6.  | Only samples that are ready to be analyzed are accepted by the laboratory.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                         |
| 7.  | The remaining samples must be collected by the customer after completion of the analysis. Please inform the person in charge of the instrument on the sample collection date. Any uncollected samples will be disposed of by the laboratory after one month from result release date. For rejected samples, customers are required to collect the samples within three (3) working days after being informed of the rejection.                                                                                                                      |                                                                                                                                                                                                                                                                                         |
| 8.  | Quotation will be provided upon request.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                         |
| 9.  | Payment must be made within fourteen (14) working days after invoice is issued.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                         |
| 10. | Analysis duration is within fourteen (14) working days after receiving the samples.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                         |
| 11. | The laboratory will provide test results after the payment proof presented to the person in charge of the instrument.                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                         |
| 12. | All inquiries regarding <b>SURFACE AREA &amp; PORE ANALYZER</b> should be forwarded to the person in charge of the instrument Assistant Science Officer, Mrs Nurleyana Salleh (email: nurleyana@utm.my) or Assistant Science Officer, Mrs Iryani Nabilah Kasni (email: iryaninabilah@utm.my). UIRL Sample Acceptance Counter phone no.: 07-5333360 (working hours). Visit our website at ppmu.utm.my for more information.                                                                                                                          |                                                                                                                                                                                                                                                                                         |

**All pages must be submitted**

|                                                                                                                               |                                                      |                   |                              |
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|                                                                                                                               |                                                      | Equipment         | SURFACE AREA & PORE ANALYZER |
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| <b>SURFACE SCIENCE LABORATORY</b>                                                                                             |                                                      |                   |                              |
| <b>SAMPLE SUBMISSION FORM</b>                                                                                                 |                                                      |                   |                              |

**Application Details:**

|                                                                                          |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|--------------------------|---------------------------------------------|--------------------------|----------------|--------------------------|----------|
| <b>1. APPLICANT'S PERSONAL PARTICULARS</b>                                               |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Name of Applicant                                                                        |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Status of Applicant                                                                      | <input type="checkbox"/>                                                                                                                                                                                                                           | Undergraduates                                               | <input type="checkbox"/> | Master                                      | <input type="checkbox"/> | PhD            | <input type="checkbox"/> | Research |
| Student Matric No.                                                                       |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Faculty/ Department                                                                      |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Hand Phone No.                                                                           |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Email                                                                                    |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| <b>2. SUPERVISOR DETAILS</b>                                                             |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Name of Supervisor                                                                       |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Staff ID No.                                                                             |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Faculty/Department                                                                       |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Hand Phone No.                                                                           |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Email                                                                                    |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Signature & Official Stamp                                                               | *A digital signature is not recommended. Any matters raised in the future are beyond our responsibilities                                                                                                                                          |                                                              |                          |                                             |                          |                |                          |          |
|                                                                                          | <input type="checkbox"/>                                                                                                                                                                                                                           | I have read and agreed to the General Rules and Requirements |                          |                                             |                          |                |                          |          |
| <b>3. PAYMENT</b>                                                                        |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Method of Payment                                                                        | <input type="checkbox"/>                                                                                                                                                                                                                           | UTM PayHub System                                            | <input type="checkbox"/> | Log card                                    | <input type="checkbox"/> | Invoice        |                          |          |
| Mode of Service                                                                          | <input type="checkbox"/>                                                                                                                                                                                                                           | Normal                                                       | <input type="checkbox"/> | Fast Lane                                   |                          |                |                          |          |
| Payment using Invoice                                                                    | Research Vot No.<br>(e.g.: Q.J091600.24C3.01D32)                                                                                                                                                                                                   |                                                              |                          |                                             |                          |                |                          |          |
|                                                                                          | Balance of V29000                                                                                                                                                                                                                                  |                                                              |                          |                                             |                          |                |                          |          |
| <b>4. SAMPLE &amp; ANALYSIS INFORMATION (please attach the copy of referred journal)</b> |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Name of Sample                                                                           |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Total Number of Sample/s                                                                 |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Type of Sample                                                                           | <input type="checkbox"/>                                                                                                                                                                                                                           | * Powder<br>size <6mm<br>weight: min 0.4g                    | <input type="checkbox"/> | Solid<br>size:9mm-12mm<br>weight: 1.0g-2.0g |                          |                |                          |          |
|                                                                                          | *Samples must be dried and homogenized                                                                                                                                                                                                             |                                                              |                          |                                             |                          |                |                          |          |
| Sample Properties<br>(Please tick (/))                                                   | <input type="checkbox"/>                                                                                                                                                                                                                           | Toxic                                                        | <input type="checkbox"/> | Carcinogenic                                | <input type="checkbox"/> | Others : _____ |                          |          |
| Sample i.d/Labels                                                                        |                                                                                                                                                                                                                                                    |                                                              |                          |                                             |                          |                |                          |          |
| Test Required                                                                            | Isotherm and Surface Area<br>• BET <input type="checkbox"/><br>• Langmuir <input type="checkbox"/>                                                                                                                                                 |                                                              |                          |                                             |                          |                |                          |          |
|                                                                                          | Isotherm, Surface Area & Pore Size Distribution<br>• B.J.H <input type="checkbox"/><br>• Horvath & Kawazoe <input type="checkbox"/><br>• t-Plot (Lippens & de Boer) <input type="checkbox"/><br>• Dubinin and Raduskevich <input type="checkbox"/> |                                                              |                          |                                             |                          |                |                          |          |

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| SURFACE SCIENCE LABORATORY                                                                                                    |                                                      |                   |                              |
| SAMPLE SUBMISSION FORM                                                                                                        |                                                      |                   |                              |

|                                                                                                                                                                                                                                                                                                                      |                           |                                        |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------|--|
|                                                                                                                                                                                                                                                                                                                      |                           |                                        |  |
| Test Method                                                                                                                                                                                                                                                                                                          | 1) Isotherm               | SURFER Thermo Fisher Scientific, Italy |  |
|                                                                                                                                                                                                                                                                                                                      |                           | ASTM D 4222                            |  |
|                                                                                                                                                                                                                                                                                                                      | 2) Surface Area           | SURFER Thermo Fisher Scientific, Italy |  |
|                                                                                                                                                                                                                                                                                                                      |                           | ASTM D 3663 (Mesopore)                 |  |
|                                                                                                                                                                                                                                                                                                                      | 3) Pore Size Distribution | SURFER Thermo Fisher Scientific, Italy |  |
|                                                                                                                                                                                                                                                                                                                      |                           | ASTM D 4641                            |  |
| <div> <div> Sample pre-treatment consists in the combined operation of vacuum and temperature to remove the humidity from the sample. </div> <div> Temperature (°C) :<br/><br/> Time/ Hour :<br/><br/> * Unknown sample: Please attach the copy of TGA result for pre-treatment condition requirement. </div> </div> |                           |                                        |  |

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| SURFACE SCIENCE LABORATORY                                                                                                    |                                                      |                   |                              |
| SAMPLE SUBMISSION FORM                                                                                                        |                                                      |                   |                              |

Appendix 1

### Client Confidentiality Statement

University Industry Research Laboratory (UURL), Universiti Teknologi Malaysia (UTM) strive to maintain all confidential, proprietary information, or trade secrets in strict trust and confidence. UURL ensures such information shall only be used for the purposes stated above and shall not be used for any other purpose or disclosed to any third party without the express written consent of the UURL customer.

UURL



\_\_\_\_\_  
Name: Zaidah Rahmat

Designation: Quality Manager

Date: 21 January 2026

UURL Customer

\_\_\_\_\_  
Name:

Name of Institution/ Company:

Date: